1. Will this new course affect a current program?  
   If "yes", has a Program Revision Form been submitted concurrently?  
   Yes ☐  No ☑

2. Teaching Department:  
   Computer Science

3. Administering Faculty/Unit:  
   Science

4. Campus  
   (Downtown, Macdonald, Off Campus, Distance Ed, Other – specify)  
   Downtown

5. Effective Term of Implementation  
   (Ex. Sept. 2004 = 200409)  
   Term:  
   200709

6. Responsible Instructor  
   Theodore J. Perkins

7. Course Title (Limit 30 Characters) - required for all courses:  
   Comp. Tools for Life Sciences

8. Course Number(s)  
   Indicate course number & the number of terms spanned:  
   (tick all that apply)  
   Subject/course number:  
   Course(s) Span:  
   ☑ 1 term
   ☐ 2 consecutive terms (D1, D2)
   ☐ 2 non-consecutive terms (N1, N2)
   ☐ 3 consecutive terms (J1, J2, J3)

9. Course Title to Appear in the Calendar (optional)  
   (Limit 59 characters):  
   Note: This can ONLY be an expansion of word(s) abbreviated in the 30 character course title above.  
   Computer Tools for Life Sciences

10. Credit Weight  
    (or CEU's for non-credit CE courses):  
    3

11. Rationale for new course
   Life science laboratories in academia and industry are increasingly using new technologies to generate large volumes of biological data, or at least using such data in support of their research. However, most life science students at McGill receive little or no training in the storage, retrieval and analysis of large, heterogeneous and distributed data sets. This course will introduce students to some of the fundamental ideas of databases, how different types of data are stored, and how data in databases can be accessed and analyzed. Included in this will be the creation of scripts to automatically perform repetitive database searches and to create data analysis "pipelines" which can standardize, or formalize, a laboratory's analysis procedures. Students who take this course should have a significant advantage in researching biological problems and will be better prepared for work in industry or academic research laboratories.

12. Course Description  
    (as it will appear in the Calendar [maximum 50 words]):  
    (N.B. Faculty of Medicine must append complete course outline)  
    Basic concepts and tools for storing, retrieving, and analyzing large biological data sets: relational databases, on-line databases, structured query language, scripting for automating interaction with databases and data analysis, digital images and movies, advanced topics.

13. Supplementary information to appear in the Calendar in addition to the course description.  
    Such as: equivalent course(s), contact hours, enrolment limitations, language of instruction etc.  
    Please enter the information as it should appear in the calendar notes.  
    It is recommended that students have already taken a laboratory course (e.g., BIOL 301 Cell and Molecular Laboratory).  
    Topics motivated by biological questions.
14. Schedule Types(s):  
(Enter all that apply – see course guidelines for a complete list.)  
(i.e. Lecture, Labs, Tutorial)  

<table>
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<th>Lecture</th>
<th>Hours per Week</th>
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<th>Total Hours per Week:</th>
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15. Projected Enrolment:  
30

16. Required text and/or preliminary reading list sent to library?  
☐ Yes  ☒ No

17. Prerequisite(s) (Courses or Tests)  
Specify course number(s) or name(s) of test(s):  
BIOL 200

If the student does not have a prerequisite should web registration be blocked?  
☐ Yes  ☐ No

If “Yes” complete A and B:  
A. Indicate minimum grade or test score(s) the student must attain in prerequisite course(s) or test(s):  

B. Can the prerequisite course(s) or test(s) be taken in the same term as this course?  
☐ Yes  ☐ No

18. Corequisite(s) Course Number(s):  
Specify course number(s) and title(s):  
None

If the student does not register for the corequisite in the same term should web registration be blocked?  
☐ Yes  ☐ No

19. Restriction(s):  
Not available to students in Computer Science or Joint Computer Science programs.

Not available to students who have taken Comp 208 or Comp 250, or who are taking either of these at the same time.

20. Consultation Reports Attached  
☒ Yes  ☐ N/A

21. Additional Course Charges (must be approved by the Fee Policy Committee)  
Description of Fee  
(e.g. screening fee)  
Amount  
None
### 23. Approvals:

<table>
<thead>
<tr>
<th>Routing Sequence</th>
<th>Departmental Meeting</th>
<th>Departmental Chair</th>
<th>Other Faculty</th>
<th>Curric/Academic Committee</th>
<th>Faculty</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>Sue Whitesides</td>
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<td>Signature</td>
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<tr>
<td>Departmental Contact Person (name/phone/email)</td>
<td>Judy Kenigsberg ext. 00895</td>
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</tbody>
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**INFORMATION FOR ADMISSIONS, RECRUITMENT & REGISTRAR’S OFFICE**

- **To be completed by the Faculty**
  - Slot Course: [ ] Yes [ ] No
  - Thesis Component: [ ] Yes [ ] No
- **To be completed by ARR**
  - CIP Code

**For Continuing Education Use**

- CE Admin. Unit:
- CE Non-Grant Courses:
- Flat Rate: Cdn
  - Flat Rate: [ ] Yes [ ] N/A

Nov. 13, 2006

Sue Whitesides

Judy Kenigsberg ext. 00895